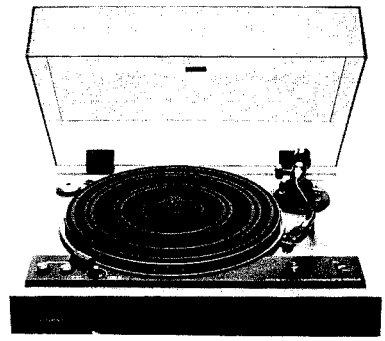
977

SERIAL NO. 3027

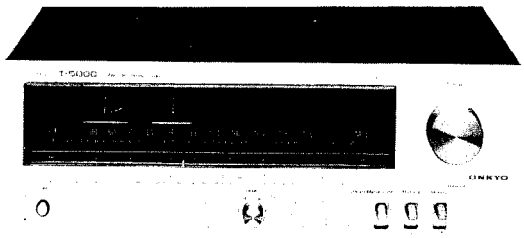
14

ONKYO® SERVICE MANUAL

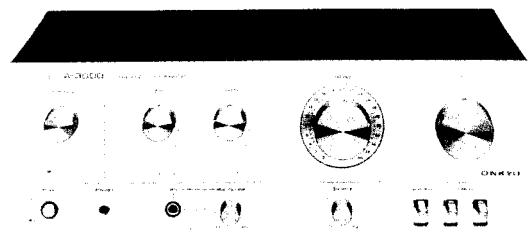
TURNTABLE SYSTEM
CP-5000A



AM/FM STEREO TUNER
T-5000



INTEGRATED STEREO AMPLIFIER
A-3000



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ONKYO®
AUDIO COMPONENTS

16

SPECIFICATIONS

A-3000

Power Output	
Dynamic:	100 watts total
Continuous:	35 watts per channel at 4 ohms both channels driven 1 kHz, 0.8% THD 28 watts per channel at 8 ohms both channels driven 1 kHz, 0.8% THD
Power Supply Rating	AC 110/120/220/240V 50/60 Hz
Total Harmonic Distortion	0.8% at rated power 0.2% at 1 watt output
IM Distortion	0.5% at rated power
Damping Factor	35 at 8 ohms 1 kHz 10 watts
Frequency Response	15 ~ 25,000 Hz (±1 dB)
Power Bandwidth	20 ~ 40,000 Hz (0.8% THD –3 dB)
Sensitivity and Impedance	
Phono:	2.5mV/50 kΩ
Tuner:	200 mV/50 kΩ
Mic.:	9 mV/50 kΩ
Tape play:	200 mV/50 kΩ
Tape rec Out:	200 mV/10 kΩ
DIN play:	200 mV/50 kΩ
DIN rec out:	30 mV/100 kΩ
Bass Control	±9 dB at 100 Hz
Treble Control	±9 dB at 10,000 Hz
Signal to Noise Ratio	
Phono:	70 dB (IHF C Network)
Tuner:	90 dB (IHF C Network)
Loudness	+5.5 dB at 70 Hz +4.5 dB at 10,000 Hz
Controls	POWER, SPEAKER (OFF, A, B, A+B), SELECTOR (PHONO, TUNER), VOLUME, BALANCE, BASS, TREBLE, TAPE MONITOR-1 and 2, LOUDNESS, MIC VOLUME
Outputs	SPEAKER A and B, HEADPHONE, TAPE REC OUT-1 and 2, DIN REC OUT
Inputs	PHONO, TUNER, TAPE PLAY-1 and 2, DIN PLAY, MIC
Semiconductors	2 ICs, 13 Transistors, 6 Diodes
Dimensions (W x H x D)	414 (16 5/16″) x 150 (5 7/8″) x 301mm (11 7/8″)
Weight	7.2 kg (15.9 lbs.)

T-5000

Power Supply Rating	AC 110/120/220/240V, 50/60 Hz
Tuning Range	FM: 87.5 ~ 108 MHz AM: 530 ~ 1605 kHz
Usable Sensitivity	FM Mono: 2.5 μV (13.2 dBf) IHF 1.7 μV DIN FM Stereo: 7 μV (22.1 dBf) IHF 50 μV DIN AM: 40 μV
50 dB Quieting Sensitivity	FM Mono: 5 μV (19.2 dBf) IHF FM Stereo: 40 μV (37.2 dBf) IHF
Intermediate Frequency	FM: 10.7 MHz AM: 455 kHz
Capture Ratio	FM: 1.5 dB
Image Rejection Ratio	FM: 35 dB AM: 40 dB
IF Rejection Ratio	FM: 80 dB AM: 30 dB
Signal to noise ratio	FM: 60 dB IHF FM: 55 dB DIN
Alternate Channel Attenuation	FM: 50 dB (IHF)
AM Suppression Ratio	FM: 50 dB
Harmonic Distortion	FM Mono: 0.3% FM Stereo: 0.5% AM: 0.8%
Frequency Response	FM: 30 ~ 15,000 Hz (+2, –3 dB)
Stereo Separation	FM: 37 dB at 1 kHz 30 dB at 100 ~ 10,000 Hz
Pilot Suppression	FM: 55 dB
Controls	POWER, TUNING, SELECTOR (FM, AM), LEVEL, MUTING, STEREO NOISE FILTER
Output Voltage	Variable max. FM: 1.2V AM: 0.35V
Semiconductors	1 FET, 12 Transistors, 2 IC, 13 Diodes
Antennas	FM: 300Ω balanced, 75Ω unbalanced AM: Built in ferrite core antenna and external terminal
Dimensions	414 (16 5/16″)W x 150 (5 7/8″)H x 306 (12 1/16″)D mm
Weight	5 kg (11 lbs)

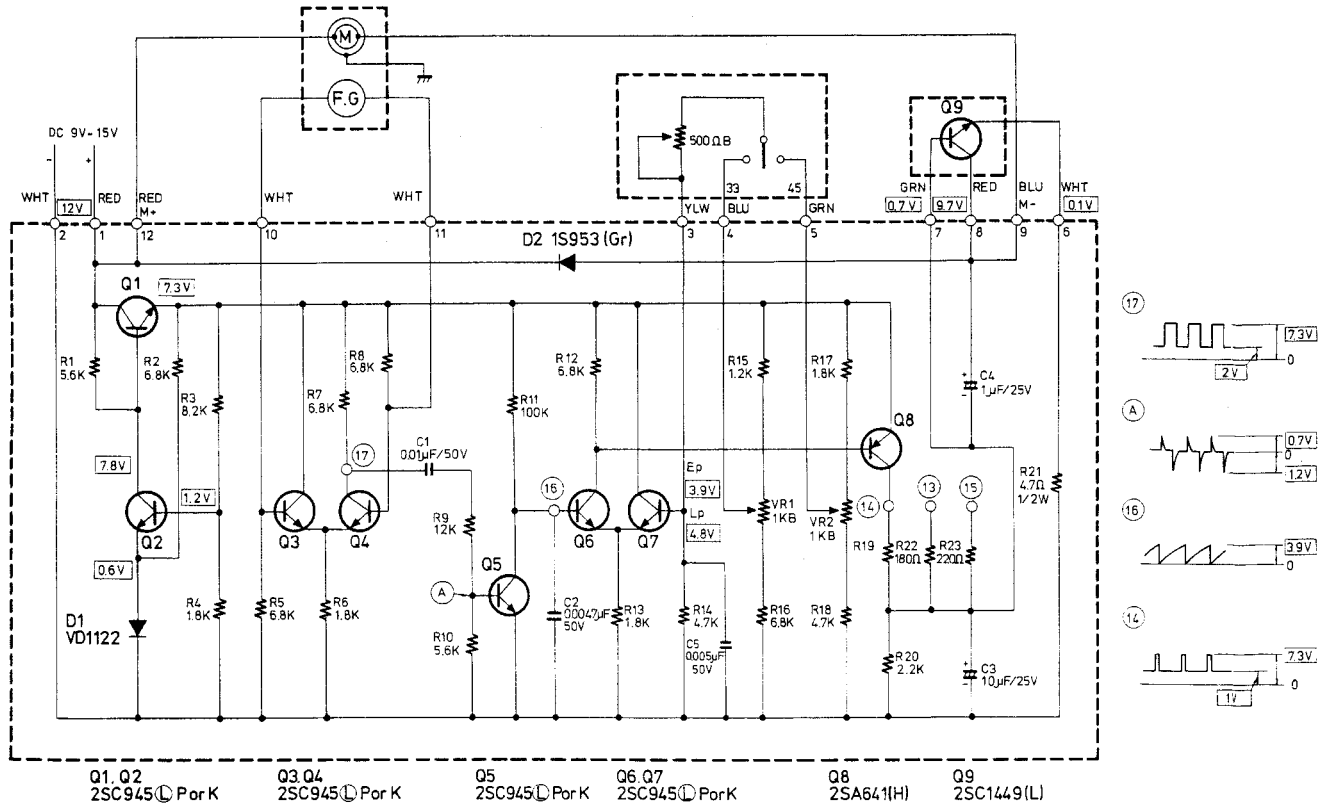
CP-5000A

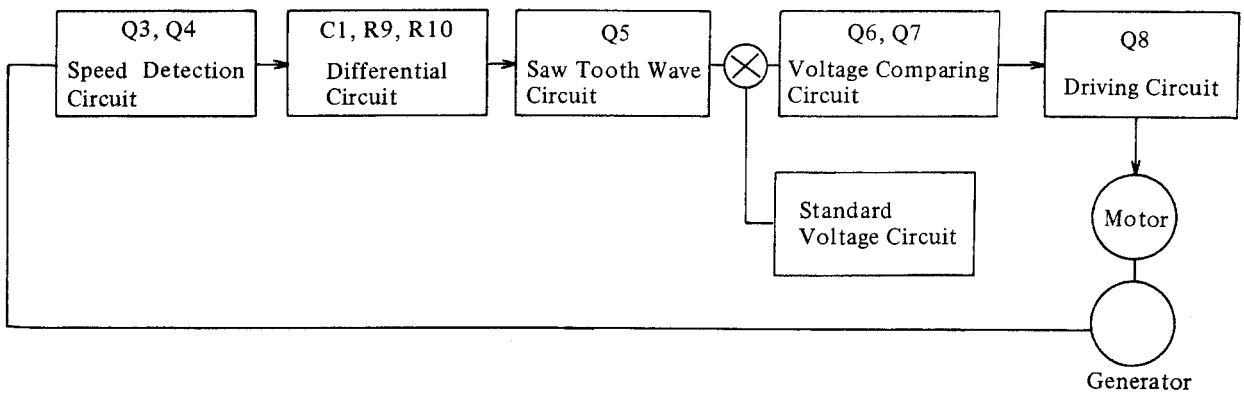
Type	2 speed, belt driven, auto-return, auto-cut turntable with arm lifter.
Turntable platter	30cm aluminum diecast with stroboscope. 1.1 kg.
Motor	FG servo controlled DC motor.
Speeds	33 1/3 and 45 rpm. Adjustable range ±2%.
Wow and flutter	Less than 0.06% (WRMS)
S/N ratio	More than 55 dB
Tonearm	Static balanced S-shaped pipe arm with lockable head shell, anti-skating device, and direct read tracking force scale. Tracking force adjustment: 0 ~ 3gr. Overhang: 11mm. Effective arm length: 210mm Tracking error: less than ±1.5°.
Cartridge	VM type OC-35V
Frequency response	20-20,000 Hz
Impedance	47 kΩ
Compliance	7×10^{-6} cm./dyne
Output	3.5 mV
Separation	20 dB
Stylus	DN-35ST
Tip	0.65 mil (16.5 μ) Diamond
Tracking force	2 g.
Power supply	110V ~ 120V or 220V ~ 240V, 50/60 Hz
Power consumption	3W

Specifications and design are subject to change without notice.

CP-5000A SCHEMATIC DIAGRAM

Voltage Controlling Circuit





The signal from the AC generator, provided coaxially with the motor rotation axis, is shaped into rectangular wave from by means of the speed detection circuit and then a differential wave form synchronized with the rotation frequency is obtained through the differential circuit. By the use of the stepping up portion of the differential wave form, a sawtooth wave which has the wave height proportionate to the frequency at the time of ON-OFF of a transistor is produced.

This sawtooth wave is compared with the standard voltage which is the output of the separately constituted standard voltage circuit, and the portion where the sawtooth wave peak value becomes higher than the standard voltage is taken out as a control signal. The control signal (rectangular wave pulse) is integrated for use as a motor driving signal.

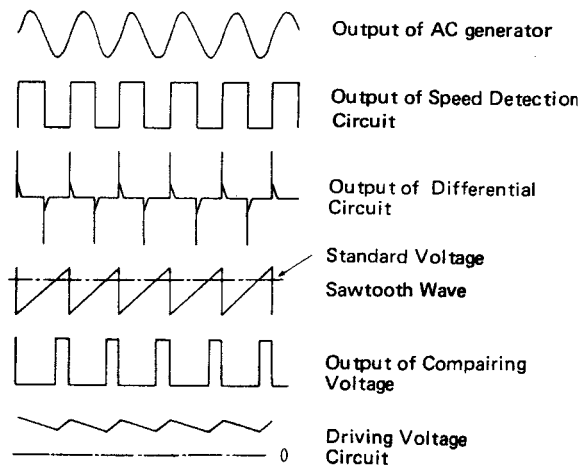
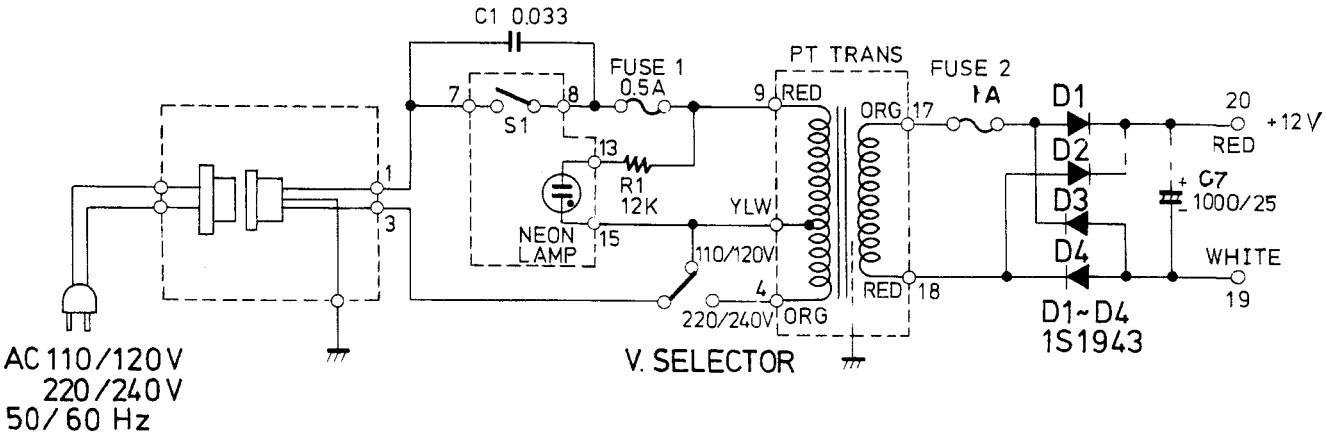


fig - 1

CP-5000A SCHEMATIC DIAGRAM

Power Supply Circuit



CP-5000A SERVICE ADJUSTMENT AND PROCEDURE

Power Voltage Selection

The record player has been set at a voltage of 220/240V before shipment.
To change for 110/120V, turn switch to the right position.
To change voltage, detach the fixture plate, adjust switch position and reattach the fixture plate.
The voltage selector switch is located on the side of the turntable.

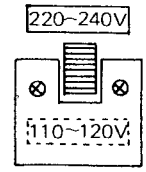


fig. - 2

Auto-return

Adjust the return position with the fine adjustment nut shown in fig.3.
After final adjustment, apply lock–tite to the nut.
The stylus point moves below the correct point when it is rotated clock-wise
The stylus point moves closest to the record edge when it is rotated counter-clock wise

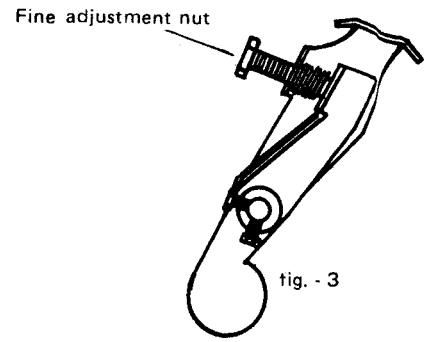


fig. - 3

Motor Speed Adjustment

When motor, turntable, belt, etc. are to be replaced or when the setting of revolution has been deviated by the lapse of time, carry out adjustments in the following manner.
When the turntable is stopped during energizing (more than continuously 1 minute), it rarely occurs that the motor may be locked and damaged, or, even if the motor is not locked, the belt may sustain an unreasonable force, giving rise to a partial elongation or flaw, and a poor stability of revolution.

Adjustment:
Set the VR (Z411-C) for fine adjustment nearly at the center, set the speed selector at 33-1/3, turn VR1 provided on the control circuit PC plate to the point to stop the upper part of the stroboscopic stripes. Then, switchover the rotation to 45 r.p.m., and adjust VR2 so as to stop the lower side of the stroboscopic stripes.

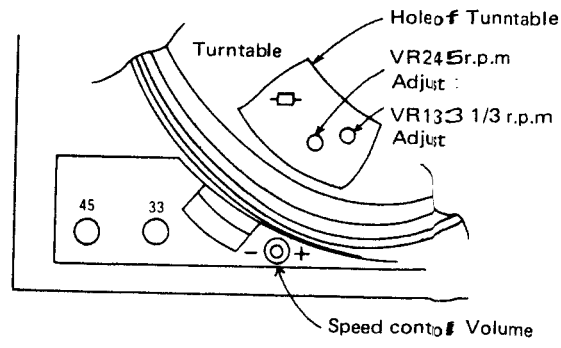


fig. - 4

Replacement of Motor

As for the screws for mounting motor, there are two kinds used, i.e., one chrome plated panhead screw (2.6 x 4) and two unichrome plated panhead screw (2.6 x 3) for ground co-fastening part. If the 4m/m size screw is applied to the portion of the 3m/m size screw, the motor insulation rubber is damaged to provide unstable motion of motor. Be careful not to mistake. Spring washers are provided for fastening purpose. Never fail to use them.

Replacement of Belt

1) In order to give an improved stability of the tension of the belt from the viewpoint of the motor construction, a one-side shaped belt is used. For replacement, please use the regular one SN242129B. The SN of the conventional both side cut belt is 242129. With regard to the one-side polished belt, the use in a manner that the polished side is in contact with the pulley and the turntable is the correct method, but the reverse manner may also be practically acceptable, where the S/N ratio and the revolution vary to a very slight degree. The polished surface is the side where the surface is uniform and mat. The opposite side is slightly lustrous and uneven.
2) The pulley is a single step without any belt guide.
   Apply the belt to the turntable to the side near the lower end of the drum. Should the belt be set to the upper side, it would slip upward to the flange of the pulley at the time of the application to the pulley, with the result that the correct revolution may not be obtained or the belt may go out of the pulley.
3) Since the shaft of the motor is extremely fine at 2ϕ, be careful that any collision of turntable, etc. during service may cause a bend to the shaft or an irregular revolution in consequence of the deviation of the position of the bearing holder, etc.

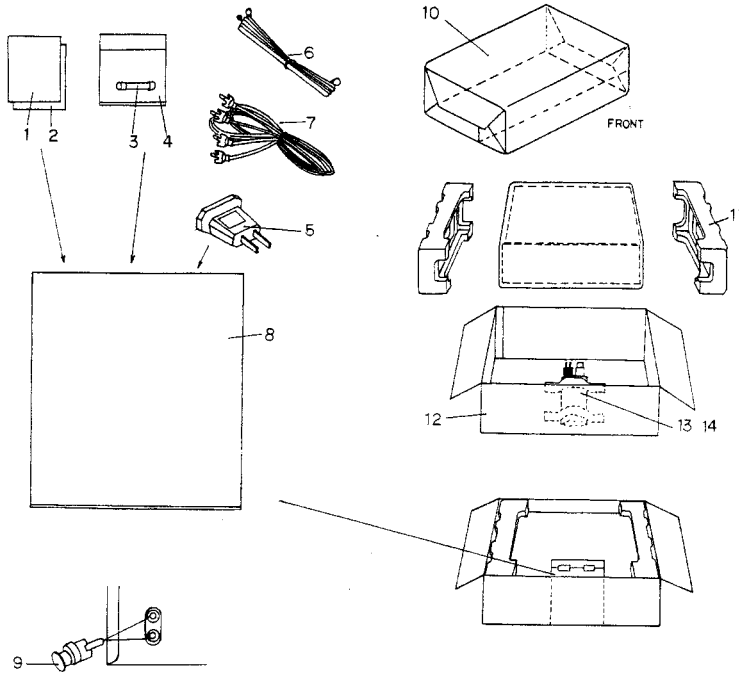
Fitting of Neon Lamp

Fit the neon lamp in a manner to set the electrode of the neon lamp nearly to the center of the claw of the lamp holder. If the neon lamp is not correctly fitted, the lamp house may include a dark area for lighting.

Others

1) Since the stopper of TT shaft is a molded product, do not use the one once disconnected but replace with a new one (because the continued use provides a cause for the leakage of oil and the coming off of shaft).
2) For lubrication of TT shaft, use the oil of ANDEROL #465 or #402.
3) For lubrication of motor bearing, the oil of LAUNA #40 is used. Use of other oil may cause irregular rotation and unstable revolution.
4) For disconnecting the PC plate, extract after sufficiently constricting the stopper for the mold.
   Be careful not to exert unreasonable power for disconnecting the PC plate, or the PC plate will cause breakage.

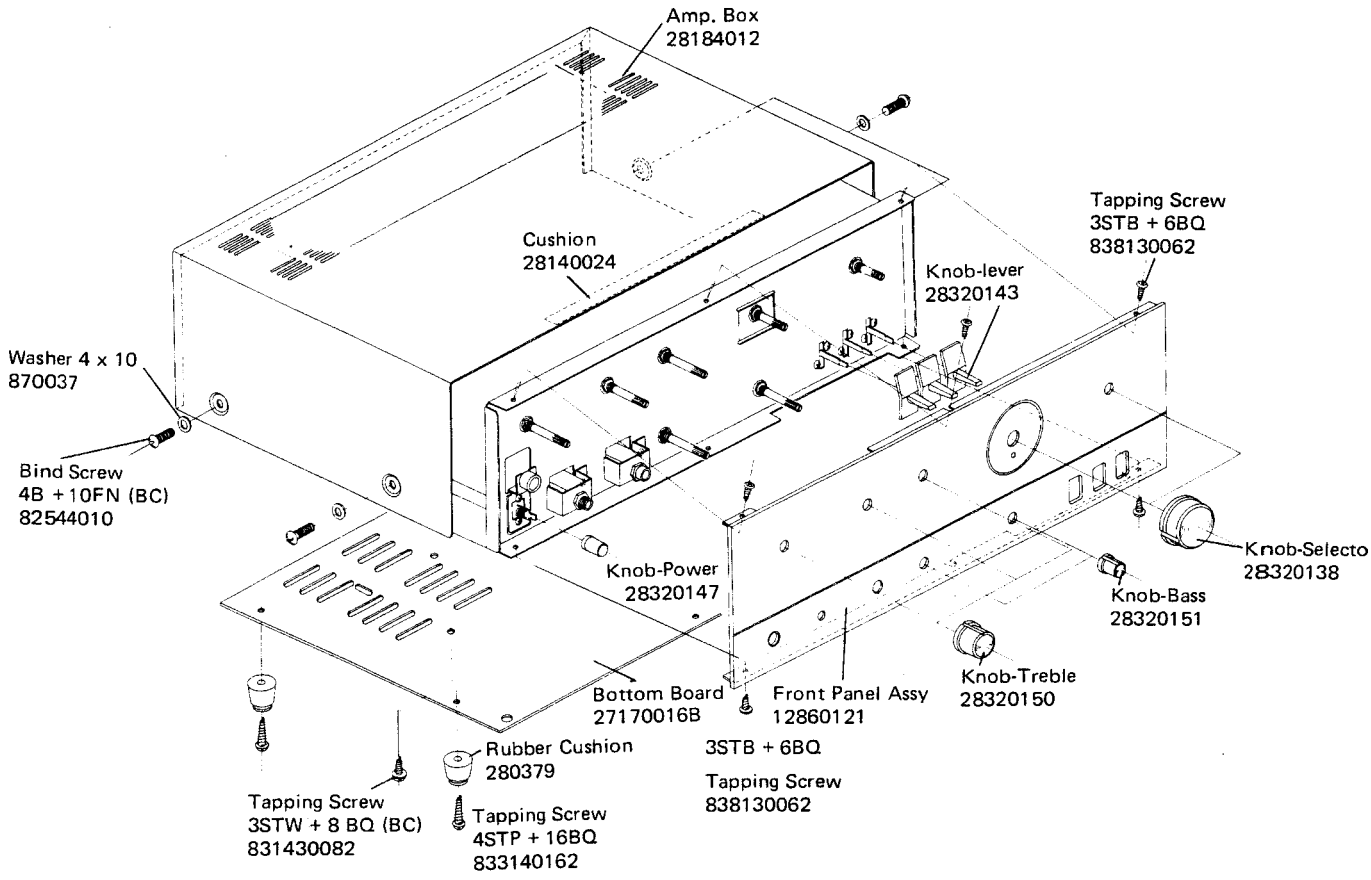
PACKING PROCEDURE



PARTS LIST

			A – 3000		T – 5000	
ITEM	DESCRIPTION	SPECIFICATIONS	STOCK NO.	Q'TY	STOCK NO.	Q'TY
1.	Schematic Diagram		29345011	1	29345012	1
2.	Instruction Manual		29340166	1	29340167	1
3.	Fuse	3A – T	252003	2	–	
	Fuse	1A – T	–		252001	1
4.	Poly Bag	150 x 80 mm	29100002	1	29100002	1
5.	Conversion Plug	CV-K or CV-K-1	292063 or 25055018	1	292063 or 25055018	1
6.	FM Antenna		–		292064	1
7.	Output Cord		–		253074	1
8.	Poly Bag	350 x 250mm	29100006A	1	29100006A	1
9.	Shorted Pin		250153	2	–	
10.	Protection Sheet	670 x 1000 mm	29095016	1	29095016	1
11.	Pad		29090124	2	29090124	2
12.	Master Cartor Box		29050093	1	29050097	1
13.	Tag – Voltage		293268	1	293268	1
14.	Power Supply Cord		13876801	1	13876801	1

A-3000 EXPLODED VIEW



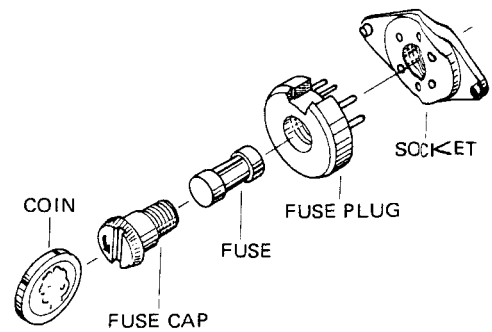
CAUTIONS

LINE VOLTAGE AND FUSE

This model operates on each one of the four line voltages, 110V, 120V, 220V and 240V.
Set the unit to the proper line voltage by the following procedure described below.

CHANGE LINE VOLTAGE SETTING AND FUSE

To remove the fuse, turn the fuse cap located on the line voltage selector counter–clockwise.
Then remove the fuse plug from the unit, Put the fuse plug back so that the proper line voltage marking can be seen through the cut in the edge of the plug.
Whenever the position of the selector is changed, check the rating of the fuse.
A 0.5A fuse is for 220V or 240V operation and a 1.0A fuse is for 110V or 120V operation. (T-5000)
If the rating of the fuse is correct, replace the cap.



Fuse rattings are:
A – 3000
110 ~ 120V - —3A
220 ~ 240V - —2A

FUSE REPLACEMENT

When the fuse has blown, remove the fuse cap and replace the fuse with a new one.

T-5000 ALIGNMENT PROCEDURE

INSTRUMENTS REQUIRED

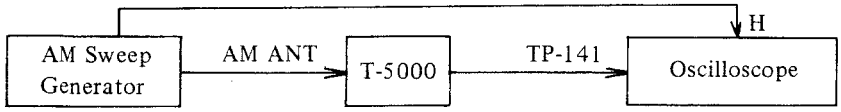
1. AM Sweep Generator
2. AM and FM Signal Generator
3. Vacume Tube Voltage Meter (VTVM) AC, DC
4. Oscilloscope
5. Distortion Analyzer
6. Stereo Modulator
7. Frequency Counter

GENERAL ALIGNMENT CONDITIONS

1. Signal input should be kept as low as possible.
2. Standard modulation is 400Hz 30% (AM), 400Hz 100% (FM MONO) pilot 10% sub and main 90% (FM STEREO).

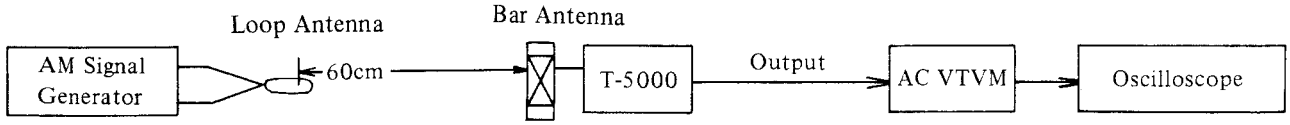
(1) AM IF ALIGNMENT

1. Set SELECTOR switch to AM.
2. Set radio dial to quiet point.



Set signal	Adjust	Oscilloscope	Remarks
455 kHz	X151 (CFZ-455C) L153 (NIT-7520)	Maximum Symmetrical Response	Usually not necessary to adjust

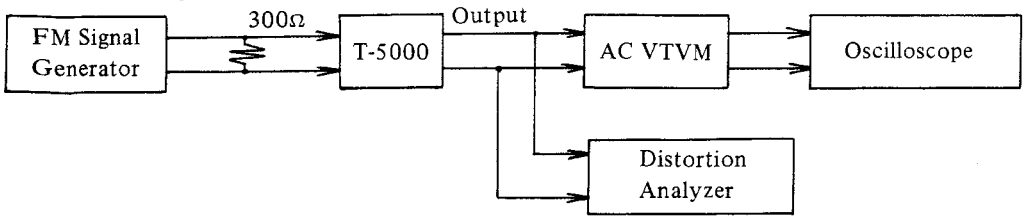
(2) AM RF ALIGNMENT



Step	Set Signal	Set Radio Dial	Adjust	VTVM reading	Remarks
1	515 KHz 400Hz 30%	Lower end (515 KHz)	L152 NMO-2503	Maximum	Repeat step 1 and 2 as necessary
2	1680 KHz 400 Hz 30%	Upper end (1680 KHz)	TC-4	Maximum	
3	600 KHz 400 Hz 30%	600 KHz	L151 NMA-2523	Maximum	Repeat step 3 and 4 as necessary
4	1400 KHz 400 Hz 30%	1400 KHz	TC-3	Maximum	

(3) FM FRONT END ALIGNMENT

1. Set SELECTOR switch to FM.
2. Push MUTING switch.
3. Connect FM Signal Generator to 300-ohm antenna terminals.

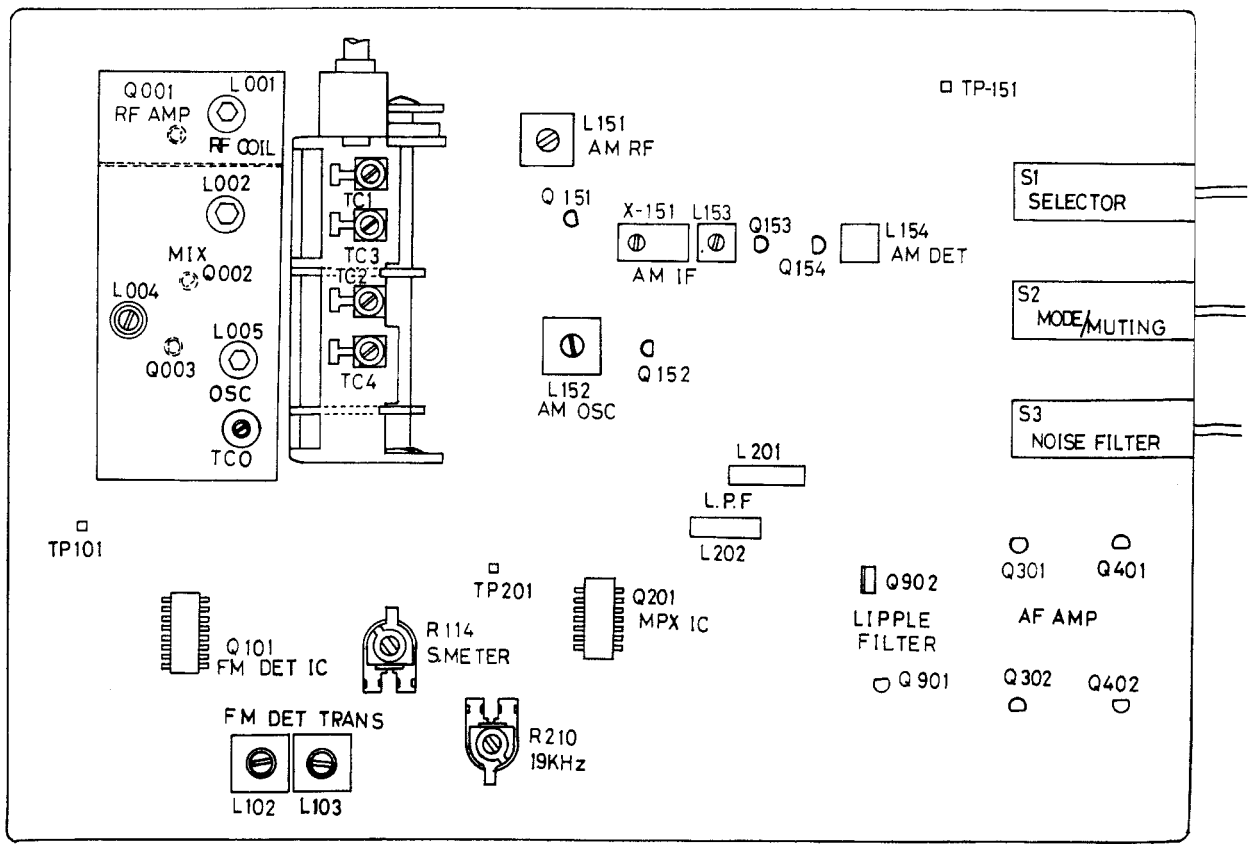


When adjust step 5 and 6, Set FM Signal Generator level as low as possible.

Step	FM Signal Generator	Dial to set	Adjust	Output Indicator	Adjust for	Remarks
1	No signal	Quiet Point	L102 NIT-0519P	Tuning Indicator	Center	Repeat step 1 and 2 as necessary.
2	98 MHz 60 dB 400 Hz 100% mod.	98 MHz	L103 Blue core NIT-0519S	Distortion Analyzer	Minimum	
3	90 MHz 60 dB 400 Hz 100% mod.	90 MHz	L005 OSC Coil NFO-3003	AC VTVM or Oscilloscope	Maximum	Repeat step 3 and 4 as necessary.
4	106 MHz 400 Hz 60 dB 100% mod.	106 MHz	TCO		Maximum	
5	90 MHz 400 Hz 100% mod.	90 MHz	L001, L002		Maximum	Repeat step 5 and 6 as necessary.
6	106 MHz 400Hz 100% mod.	106 MHz	TC001 TC002		Maximum	
7	98 MHz 400 Hz 100% mod.	98 MHz	L004		Maximum	

FM MPX ALIGNMENT

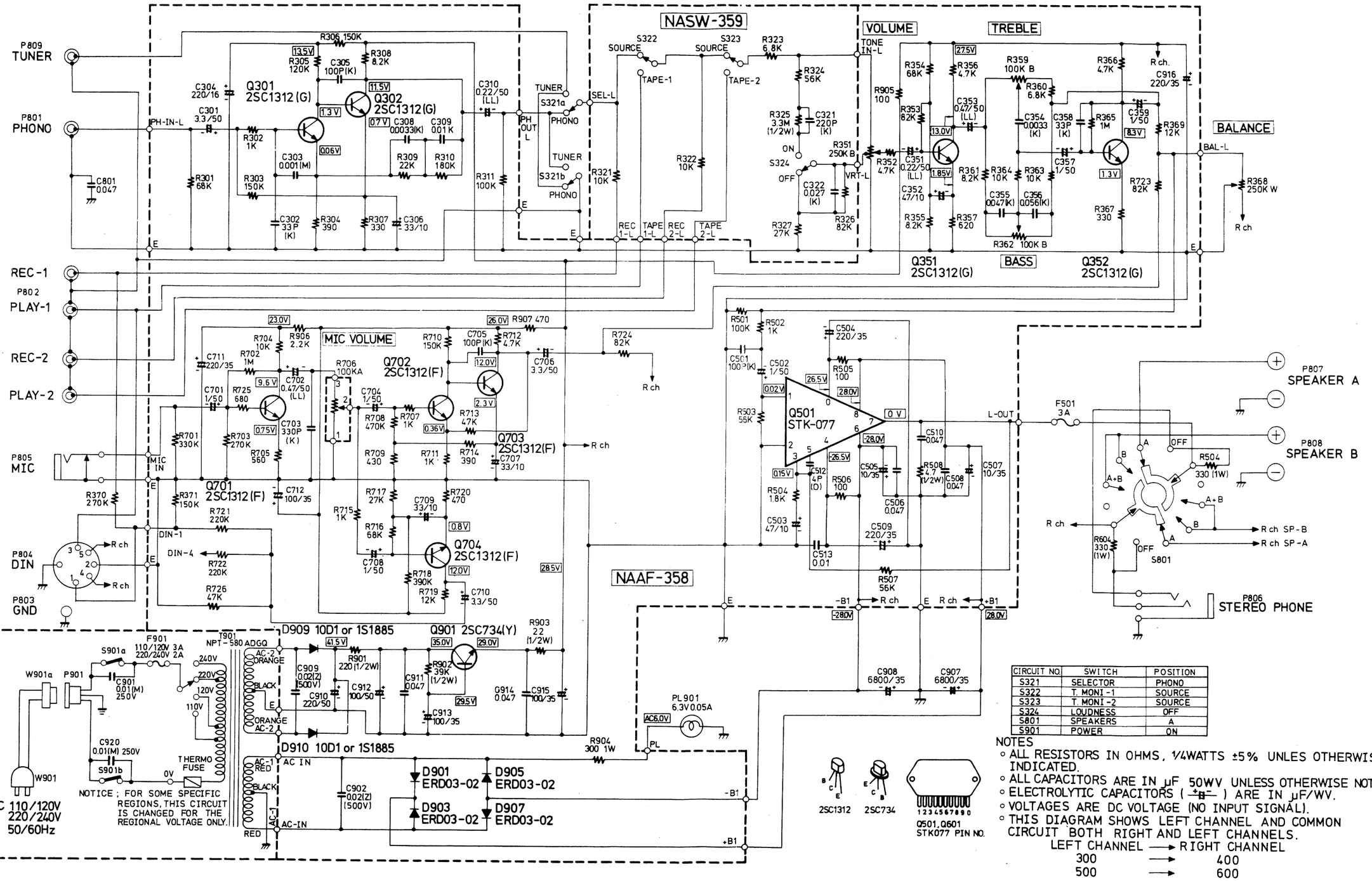
1. Connect FM Signal Generator to 300-ohm antenna terminals.
2. Connect Frequency Counter to TP-201.
3. Set FM Signal Generator to no mod. (98 MHz, 400Hz, 60 dB)
4. Set radio dial to 98 MHz.
5. Adjust the Frecquency to 19000 ± 19 Hz with R201.
6. The stereo indicator should light up when an FM stereo program is being received.



A-3000 PARTS LIST

PARTS NO.	DESCRIPTION	SPECIFICATIONS	Q'TY	STOCK NO.	REMARKS
	AF-AS	NAAF-358	1	12870558	
	SW-AS	NASW-359	1	12870559	
Q501, Q601	IC	STK-077	2	222007	Power Amp.
PL901	Pilot Lamp	6.3V 0.05AW3	1	210015	Power Source Ind.
T901	Transformer-Power	NPT-580ADGQ	1	230174	
C901, C902	Capacitor-IS	PME271Y510CEE	2	3500052	0.01μF 250V
C907, C908	Capacitor-Elect.	CE62W35V6800μF	2	3504077	
R368	Resistor-Variable	N16R250KW35	1	5146004	Balance
R504, R604	Resistor-Metal Oxide Film	RS1WBJ330 ohm	2	441623314	
R706	Resistor-Variable	N16R100KA35	1	5146005	Mic Volume
S801	Switch-Rotary	NRS-124-35Y	1	25030044	Speakers
P801	Pin Jack	NPJ-2PRBL-02	1	25045023	Phono
P802	Pin Jack	NTM-6WPBL-E1	1	250171	Tape
P803	Terminal		1	25060008	GND
P804	Socket-DIN		1	250008	
P805	Jack-Microphone	HJ-631S-H2	1	250051	
P806	Jack-Stereo Headphone	XG-7716	1	250078	
P807, P808	Terminal-Speaker	NTM-4WPUN1	2	25060001A	
P809	Pin Jack	NTM-4WPBL-E1	1	250169	Tuner
F501, F601	Holder-Fuse		1	25050004	With the cover
F501a, F601a	Fuse	3A-T	2	252003	Speaker
S901	Switch-Push	NPS-121-L	1	25035034	Power Source
S321	Rotary Switch	NRS-132-35F	1	25030066	Selector
P901	Inlet-3P	CM-3	1	25050013	
F901	Socket-VS	S-17205-7	1	250186	
F901a	Fuse	2A-T	1	252002	
W901	Power Supply cord	AS-CEE	1	253083	
W901a	Plug-PS	SFO-40A3	1	250227	
	Binder	SKB-1	8	260208	
A006	Back Panel		1	27120052	
A026	Heat Sink		1	27160008	
	≪NAAF-358≫				
Q301, Q302, Q401, Q402, Q351, Q352, Q451, Q452	Transistor	2SC1312-31(G)	8	2210137	
Q701~Q704	Transistor	2SC1312-31(F)	4	2210136	
Q901	Transistor	2SC734(Y)	1	2210064	
D901, D903, D905, D907	Silicon diode	ERD03-02	4	223832	
D909, D910	Silicon Diode	10D1 or 1S1885	2	223801 or 223802	
C301, C401, C706, C710	Capacitor-Elect.	CE04W50V3.3μF	4	352780331	
C304, C404	Capacitor-Elect.	CE04W16V220μF	2	352742211	
C301, C406, C707, C709	Capacitor-Elect.	CE04W10V33μF	4	352733301	
C352, C452, C503, C603	Capacitor-Elect.	CE04W10V47μF	4	352734701	
C357, C359, C502, C457, C459, C602, C708	Capacitor-Elect.	CE04W50V1μF	7	352780101	
C504, C509, C701, C711, C604, C609, C704, C916	Capacitor-Elect.	CE04W35V220μF	8	352762211	
C505, C507, C605, C607	Capacitor-Elect.	CE04W35V10μF	4	352761001	
C712, C913, C915	Capacitor-Elect.	CE04W35V100μF	3	352761011	
C910	Capacitor-Elect.	CE04W50V220μF	1	352782211	
C912	Capacitor-Elect.	CE04W50V100μF	1	352781011	
C310, C410, C351, C451	Capacitor-LL	LL04B50V0.22μF	4	392882297	
C702	Capacitor-LL	LL04B50V0.47μF	1	392884797	
C355, C455	Capacitor-DE	DE93M50V0.047μF	2	374124735	
C356, C456	Capacitor-DE	DE93M50V0.056μF	2	374125635	
R351, R451	Resistor-Variable	N24RGL41C250KBTP35	1	5172045	VOLUME
R359, R362, R459, R462	Resistor-Variable	N16RGC100KB35	2	5104037	TONE
R904	Resistor-Metal Oxide Film	RS1WBJ300 ohm	1	441623014	
	≪NASW-359≫				
C322, C422,	Capacitor-DE	DE93M50V0.027μF	2	374122735	
S322-S324	Switch-Lever	NLS-122-27-SL	3	25040021	T. MONI. LOUDNESS

MODEL A-3000 SCHEMATIC DIAGRAM



CIRCUIT NO.	SWITCH	POSITION
S321	SELECTOR	PHONO
S322	T. MONI-1	SOURCE
S323	T. MONI-2	SOURCE
S324	LOUDNESS	OFF
S801	SPEAKERS	A
S901	POWER	ON

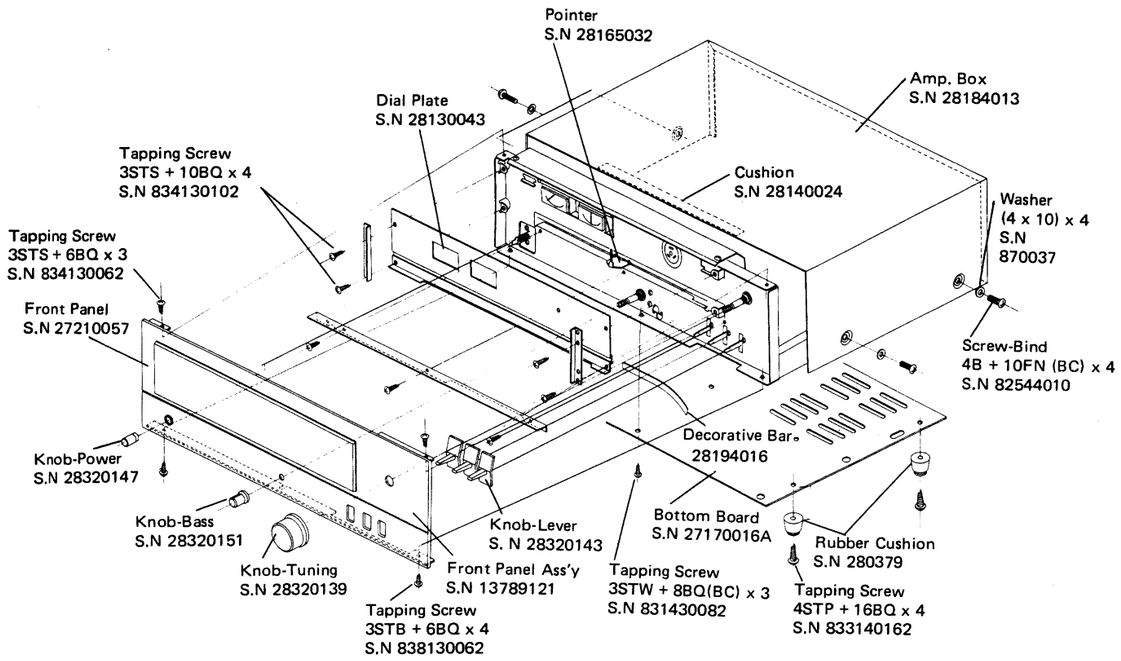
2SC1312 2SC734

Q501, Q601 STK077 PIN NO.

NOTES
- ALL RESISTORS IN OHMS, 1/4WATTS ±5% UNLES OTHERWISE INDICATED.
- ALL CAPACITORS ARE IN μF 50WV UNLESS OTHERWISE NOTED.
- ELECTROLYTIC CAPACITORS (⁺⊟⁻) ARE IN μF/WV.
- VOLTAGES ARE DC VOLTAGE (NO INPUT SIGNAL).
- THIS DIAGRAM SHOWS LEFT CHANNEL AND COMMON CIRCUIT BOTH RIGHT AND LEFT CHANNELS.

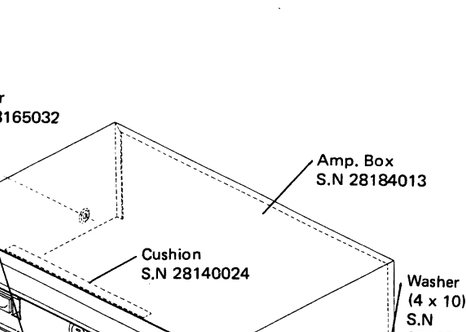
LEFT CHANNEL → RIGHT CHANNEL
300 → 400
500 → 600

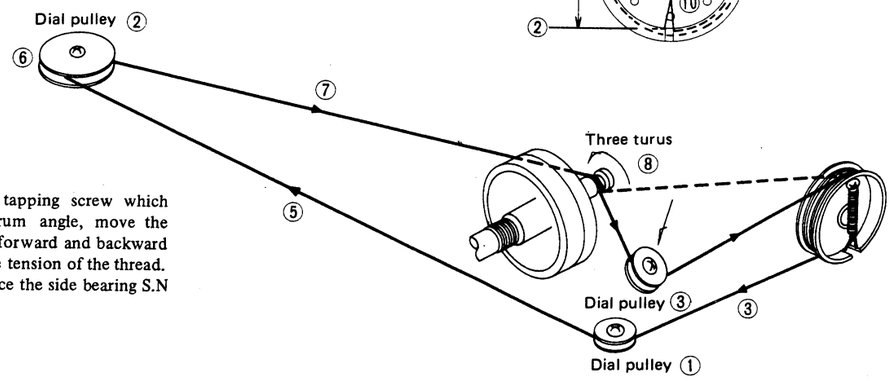
T-5000 EXPLODED VIEW



T-5000 DIAL CORD ARRANGEMENT

1. Close the variable capacitor complete and tie dial cord to the spring of the drum.
2. Thread dial cord in the direction of arrow-marked from 1 to 7 and wind dial cord three turns around the tuning shaft clockwise.
3. Thread dial cord in the direction of arrow-manked from 8 to 10.
4. Thread dial cord to the dial pulley 3 .



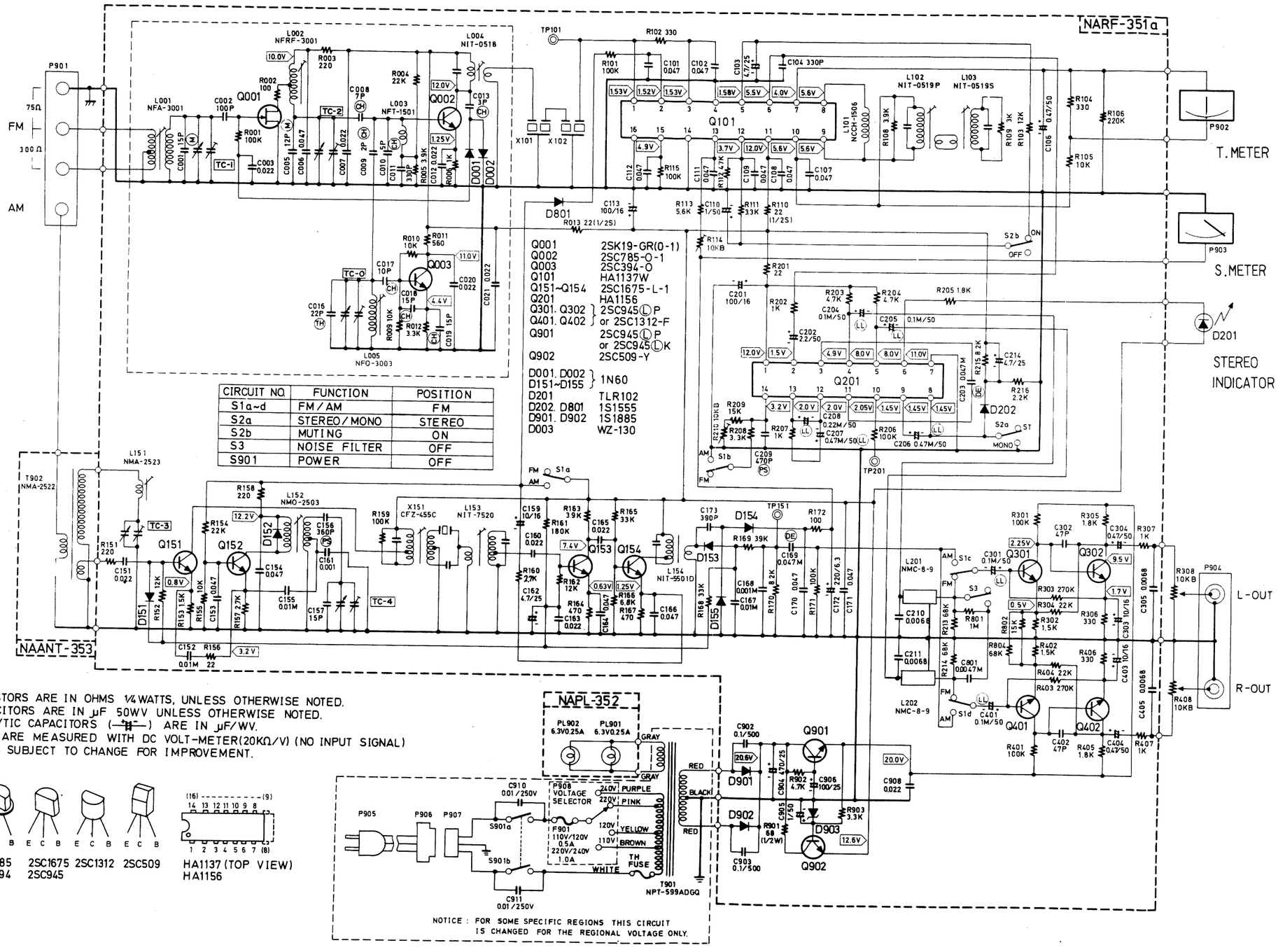


Loosen the tapping screw which stops the drum angle, move the metal fitting forward and backward and adjust the tension of the thread. Be sure to place the side bearing S.N upward.

T-5000 PARTS LIST

PARTS NO.	DESCRIPTION	SPECIFICATIONS	Q'TY	STOCK NO.	REMARKS
U1	RF-AS	NARF-351a	1	13789551A	
U2	PL-AS	NAPL-352	1	13799552	
U3	ANT-AS	NAANT-353	1	NMA2522AS	
D201	Light Emitting Diode	TLR-102	1	225005	Stereo Indicator
T901	Transformer-Power	NPT-599ADGQ	1	230172	
C910, C911	Capacitor-IS	PME271Y510	2	3500052	
R308, R408	Resistor-Variable	N16RG10KB35	1	5147005	Level
S901	Switch-Push	NPS-121-L	1	25035034	Power
F901	Fuse	0.5A-T	1	252023	
P901	Terminal	NTM-4PUN1-L	1	25060003	Antenna
P902	Tuning Indicator	NIND-0250S61	1	243061	Center
P903	Tuning Indicator	NIND-0500S60	1	243060	Stength
P904	Pin Jack	NPJ-2PRBL02	1	25045023	Output
P905	Power Supply Cord	AS-CEE	1	253083	
P906	Plug-PS	SFO-40A3	1	250227	
P907	Inlet-3P	CM-3	1	25050013	
P908	Socket-VS	SI-7205-7	1	250186	
	Binder	SKB-1	2	260208	
	Back Panel		1	27120054	
	≪NARF-351a≫				
Q001	Transistor	2SK19-Y(O-1) or 2KS19GR(O-1)	1	2210374 or 2210375	RF AMP (F.E.T)
Q002	Transistor	2SC785 (O-1)	1	2210380	MIX
Q003	Transistor	2SC394 (O)	1	2210393	OSC
Q101	IC	HA-1137W	1	222421	FM DET
Q151-Q154	Transistor	2SC1675 (L-1)	4	2210823	AM IF
Q201	IC	HA-1156	1	222419	FM MPX
Q301, Q302, Q401, Q402	Transistor	2SC945 L (P) or 2SC1312 (F)	4	2210743 or 2210136	AF AMP
Q901	Transistor	2SC945 L (P) or (K)	1	2210734 or 2210741	Lipple Filter
Q902	Transistor	2SC509Y	1	2210901	Lipple Filter
D001, D002 D151-D155	Diode-Gerumanium	1N60 N FM	7	2231031	
D202, D801	Diode-Silicon	1S1555	2	223105	
D901, D902	Diode-Silicon	1S1885	2	223802	
D903	Diode-Zener	WZ-130	1	223924	
L001	Coil-Antenna	NFA-3001	1	233088-1	
L002	Coil-RF	NFRF-3001	1	233091	
L003	Coil-Trap	NFT-1501	1	233037	
L004	Transformer-IF	NIT-0518	1	233085	
L005	Coil-OSC	NFO-3003	1	233090	
L101	Choke Coil	NCCH-1506	1	233074	
L102	Tranformer-IF	NIT-0519P	1	233086	FM DET
L103	Transformer-IF	NIT-0519S	1	233087	FM DET
L151	Coil-Antenna	NMA-2523	1	232057	
L152	Coil-OSC	NMO-2503	1	232013	
L153	Transformer-IF	NIT-7520	1	232058	
L154	Transformer-IF	NIT-5501D	1	232012	
L201, L202	Coil-MPX	NMC-8-9	2	233073	L.P.F.
X101, X102	Ceramic Filter	SFE-10.7MA	2	3010003	
X151	Ceramic Filter	CFZ-455C	1	3010004	
VC001	Capacitor-Variable	NVC2-327SA	1	3050004	
TC001	Capacitor-Trimmer	NTC-F	1	3060001	
C103, C162, C214	Capacitor-Elect.	CE04W25V4.7μF	3	352750471	
C106, C304, C404	Capacitor-Elect.	CE04W50V0.47μF	3	352784791	
C110, C905	Capacitor-Elect.	CE04W50V1μF	2	352780101	
C159, C303, C403	Capacitor-Elect.	CE04W16V10μF	3	352741001	
C172	Capacitor-Elect.	CE04W6.3V220μF	1	352722211	
C201	Capacitor-Elect.	CE04W16V100μF	1	352741011	
C202	Capacitor-Elect.	CE04W50V2.2μF	1	352780221	
C904	Capacitor-Elect.	CE04W25V470μF	1	352754711	
C906	Capacitor-Elect.	CE04W25V100μF	1	352751011	
C156	Capacitor-Polystyrene	ST08-50V360PF	1	372323615	
C209	Capacitor-Polystyrene	ST08-50V470PF	1	372324715	
C169, C203,	Capacitor-DE	DE93M50V0.047μF	2	374124737	
C204, C205, C301, C401	Capacitor-LL	LL04B50V0.1μF	4	392881097	
C206, C207	Capacitor-LL	LL04B50V0.47μF	2	392884797	
C208	Capacitor-LL	LL04B50V0.22μF	1	392882297	
R114	Resistor-Semi Fixed	R-HK10KB3P	1	5225017	S. Meter Adjust
R210	Resistor-Semi Fixed	R-HK10KB3P	1	5225017	19 KHz Adjust
S1	Switch-Lever	NLS-142-27-SL	1	25040022	Selector
S2, S3	Switch-Lever	NLS-122-27-SL	2	25040021	Muting, Noise Filtre
	Shielded Plate F		1	27150010	
	Shielded Plate H		1	27150012	
	Shielded Plate		1	27150044	
	≪NAPL-352≫				
PL901, PL902	Pilot Lamp	6.3V0.25A	2	210026	
PL901a, PL902a	Fuse Holder	SN5051	4	250113	
	≪NAANT-353≫				
T902	Coil-Antenna	NMA-2522	1	232056	
	Cover-Antenna		1	27300040	
	Holder-Antenna		1	27190016	

MODEL T-5000 SCHEMATIC DIAGRAM

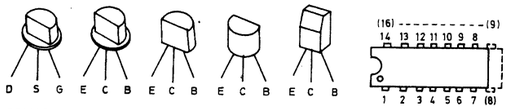


CIRCUIT NO.	FUNCTION	POSITION
S1a~d	FM/AM	FM
S2a	STEREO/MONO	STEREO
S2b	MUTING	ON
S3	NOISE FILTER	OFF
S901	POWER	OFF

Q001	2SK19-GR(0-1)
Q002	2SC785-O-1
Q003	2SC394-O
Q101	HA1137W
Q151~Q154	2SC1675-L-1
Q201	HA1156
Q301. Q302	2SC945(L)P
Q401. Q402	or 2SC1312-F
Q901	2SC945(L)P or 2SC945(L)K
Q902	2SC509-Y
D001. D002	1N60
D151~D155	
D201	TLR102
D202. D801	1S1555
D901. D902	1S1885
D003	WZ-130

NOTES :

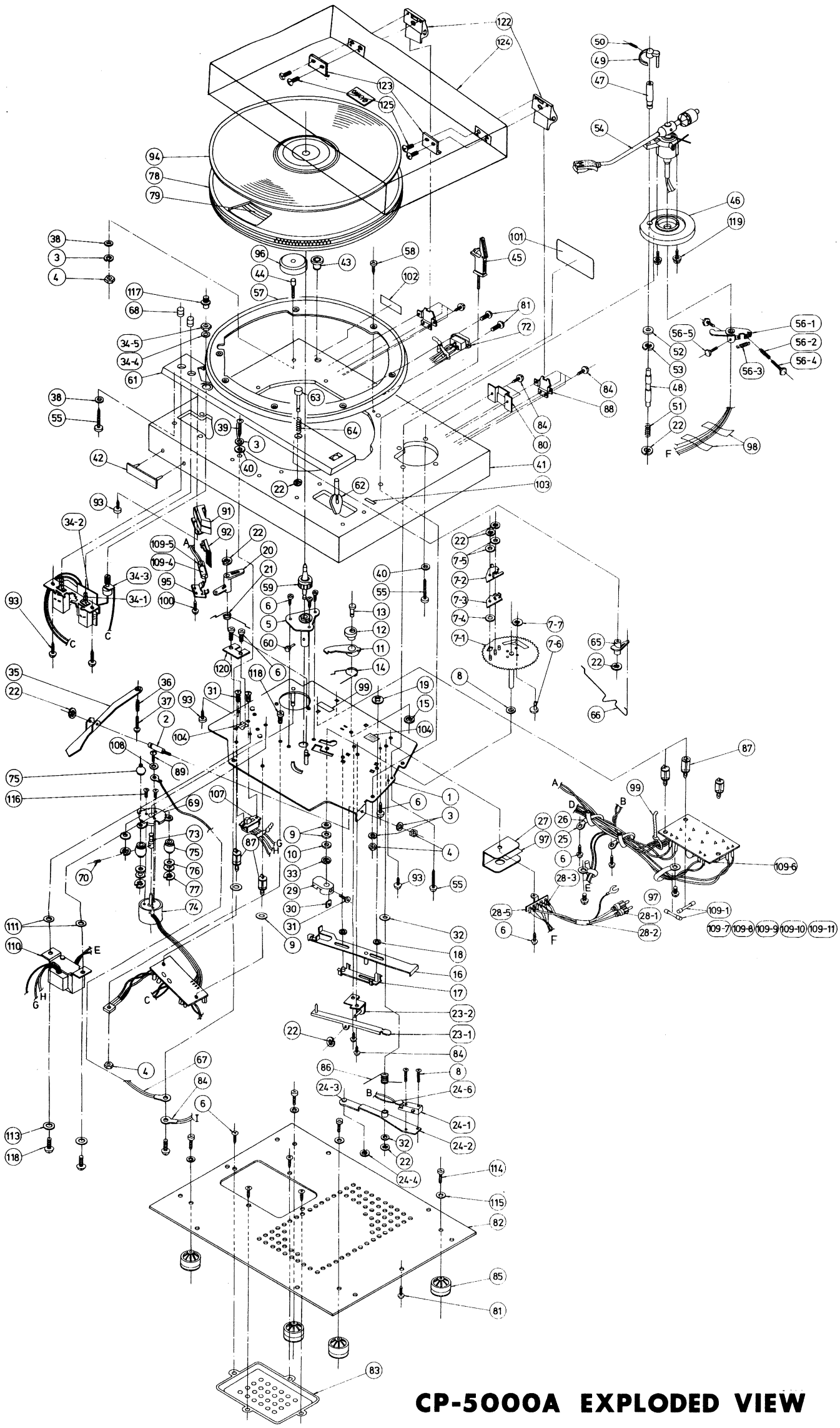
- ALL RESISTORS ARE IN OHMS 1/4 WATTS, UNLESS OTHERWISE NOTED.
- ALL CAPACITORS ARE IN μF 50WV UNLESS OTHERWISE NOTED.
- ELECTROLYTIC CAPACITORS (—⊕—) ARE IN μF/WV.
- VOLTAGE ARE MEASURED WITH DC VOLT-METER(20KΩ/V) (NO INPUT SIGNAL)
- CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.



2SK19 2SC785 2SC394 2SC1675 2SC945 2SC1312 2SC509

HA1137 (TOP VIEW) HA1156

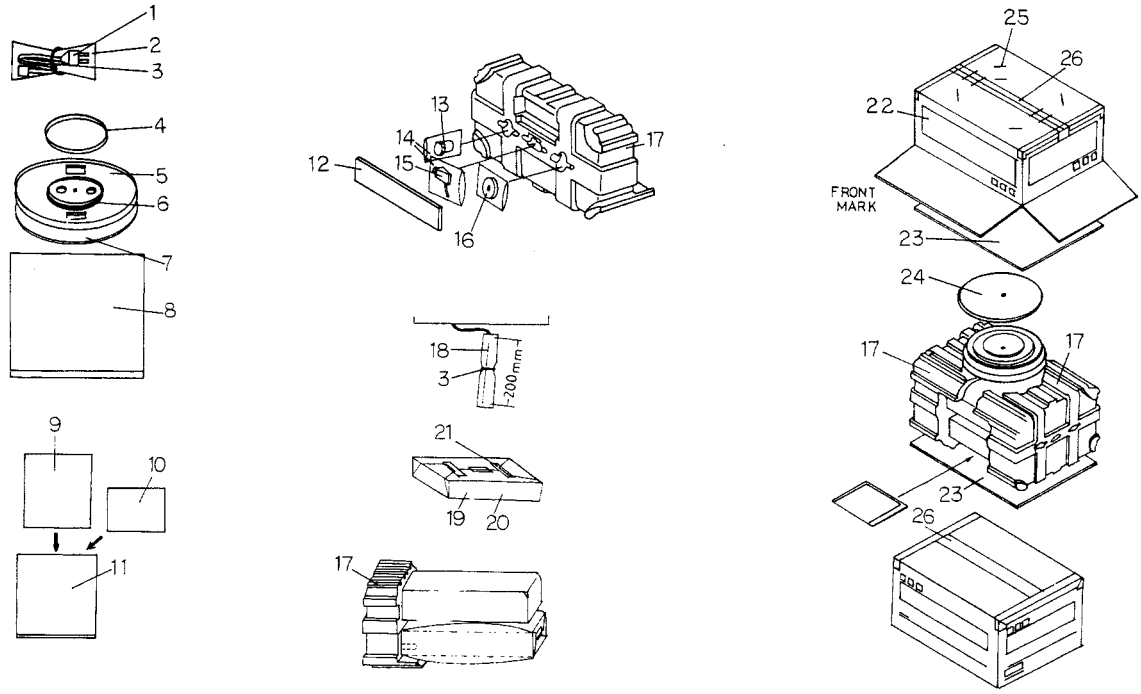
NOTICE : FOR SOME SPECIFIC REGIONS THIS CIRCUIT IS CHANGED FOR THE REGIONAL VOLTAGE ONLY.



CP-5000A EXPLODED VIEW

NO.	DESCRIPTION	S. M
1	Mechanical Chassis Ass'y	24506089
2	Reject Lever Shaft	24500749
3	S.SW-3	
4	FLN-3	
5	T.T Bearing Ass'y (2)	24502031
6	BT + 3 x 8	
7	R Gear Ass'y (2)	24500750
7-1	R Gear Ass'y (1)	24503015
7-2	Clutch Plate	24504043
7-3	Clutch Guide	24500406
7-4	Washer	
7-5	Washer	
7-6	Esccentric Pin	24506021
7-7	Spring-Washer	
8	Fieber Washer	
9	Fieber Washer	
10	Fieber Washer	
11	GS Arm	24500286
12	GS Esccentric Pin	24500777
13	GS Stud	24500776
14	GS Spring	24500778
15	Circlip	
16	Actuating Slide	24500283
17	Actuating Base	24500779
18	Washer	24506027
19	CS Circlip	
20	Kicked Lever	24500311
21	Spring	24500768
22	E-3.2	
23	Cueseesaw Ass'y	24500315
23-1	Cueseesaw Arm	24500290
23-2	Seesaw Base Ass'y	24500780
24	Switch Ass'y	24506090
24-1	Microswitch	24500241
24-2	Switch Arm	24500298
24-3	Esccentric Pin	24500425
24-4	Spring Washer	
24-5	FM + 3 x 16	
24-6	Sleeve	
25	Lug Plate	
26	Tube	
27	Shielded Plate	24506032
28	5P Lug Plate Ass'y	24505039
28-1	Shielded Cord Ass'y	
28-2	Tube	
28-3	Tube	
28-4	5P Lug Plate	
29	Switch Lever	24504048
30	Nut	
31	FM + 3 x 8	
33	E-4	
34	Volume and Switch Ass'y	24506092
34-1	Push Switch	25035036
34-2	Printed Circuit Board	25130327
34-3	Variable Resistor	5146004
34-4	Washer	
34-5	Nut	
35	Cueseesaw	24504034
36	Spring	24500773
37	FM + 3 x 12	
38	FW 3.2ϕ x 8ϕ x 1t	
39	BT + 3 x 16	
40	FW 3.2ϕ x 10ϕ x 1t	
41	Cabinet	24509041
42	Badge	28135032
43	Headshell Stand	280677
44	Shaft-45 Adaptor	24504051
45	Arm Rest Ass'y	24501065
46	Tone arm Base	24504123
47	Elevation Base	24504124
48	Elevation Shaft	24500416
49	Elevation Plate	24500354
50	FT – 3 x 3	
51	Elevation Spring	24500774
52	Washer	
53	Circlip E-6	
54	Tonearm Ass'y	24501130
55	FMT + 3 x 16	
56	Arm Base Ass'y (2)	24506039
56-1	Arm Base Ass'y (1)	
56-2	Spring	
56-3	Spring-Tone arm	
56-4	Hex Volt	
56-5	Hex Volt	
57	Frame - Turntable	24506009
58	FMT + 3 x 10	
59	T.T Shaft	24502032
60	Pin	24506086
61	Cover	24504126
62	Cue Lever Ass'y	24504037
63	Reject Button Ass'y	24504038
64	Spring – Button	24503011
65	Reject – Lever	24504039
66	Spring – Reject	
67	Shielded Cord Ass'y	24505038
68	Push Button Ass'y	28320118
69	Motor Cover ass'y	24506093
70	A 2 x 3	
71	FW 3.2ϕ x 8ϕ x 0.5t	
72	3P Inlet CM-3	25050013
73	Motor Pulley	24502040
74	Motor Ass'y	24502033
75	Motor Cushion	24502037
76	Fieber Washer	
77	E-3	
78	Turntable	24502038
79	Belt	24212913
80	Stopper	
81	WM + 3.1 x 13	
82	Bottom Board	24506087
83	Cover-Motor	27300007
84	Sheilded Cord	
85	Cushion-Motor	24509031
86	Spring-Arm	24500767
87	PC Support	24506085
88	Plate-Hinge	
89	FM + 2.6 x 4	
91	Lamp House	24504137
92	Lamp Cover	24504138
93	FMT + 3 x 8	
94	T.T Mat	292045A
95	Lamp Holder	
96	45 Adaptor	292023
99	Band	
100	FMT + 3 x 6	
101	Rating Plate	29360120
102	Label-Model	
103	Label-Stylus	29375012
104	Tag-Voltage	
107	Slide Switch S-J0275	250159
108	S. SW2.6ϕ	
109	Power Supply Ass'y	
109-1	Fuse 0.5A	252023
109-2	Fuse 1A	
109-4	Neon Lamp NE-2HU	211003
109-6	Printed Circuit Board	
109-7	Capacitor-Ceramic 1500WV0.033μF	
109-9	Diode 1S1943	223836
109-10	Fuse Holder	
109-11	Resistor 12 kΩ 1W	
109-12	Capacitor-Elect. 25WV 1000μF	351251021
110	Transformer-Power NPT-604DG	230169
111	Ring-Transformer	
114	FM + 4 x 10	
115	FW 4ϕ x 10ϕ x 0.5t	
116	FM + 2.6 x 3	
117	Knob-Volume	24504128
118	CT + 3 x 8	
120	Fixture Plate	270444
121	Phono Motor Ass'y (67, 69, 74, 116)	
122	Hinge Ass'y	28180037
123	Plate	28180022
124	Dust cover	28165028-1
125	Screw BM x 4 x 10	
	Player Ass'y MSS-7312A	242253
	Headshell	
	Cartridge OC-35V	24501108
	Stylus DN-35ST	24501110

CP-5000A PACKING PROCEDURE



CP-5000A PARTS LIST

NO.	DESCRIPTION	SPECIFICATIONS	Q'TY	S. N.
1	Power Supply Cord Ass'y		1	
1-a	Power Supply Cord	AS-CEE	1	253083
1-a	Conversion Plug	CV-K or CV-K-1	1	292063 or 25055018
1-a	Plug-PS	SFO-40A3	1	250227
1-b	Power Supply cord	AS-VDE-C	1	253089
1-c	Power Supply cord		1	253077
1-c	Plug-PS	SFO-40A3	1	250227
2	Poly Bag		1	
3	Rubber Band		1	262001
4	Pad Sheet		1	
5	Turntable		1	24502038
6	Belt		1	242129B
7	T. T Mat		1	292045A
8	Poly Bag – Turntable	450x350mm	1	29100008
9-a	Instruction Manual		1	29340160
9-b	Instruction Manual		1	29340161
10-b	Warranty Card		1	29365001-1
11	Poly Bag	330x220mm	1	29100005

NO.	DESCRIPTION	SPECIFICATIONS	Q'TY	S. N.
12	Pad Sheet – Side		1	29095031
13	Counter Weight		1	
14	Poly Bag	150x80mm	2	29100002
15	Headshell Ass'y		1	
16	45 Adaptor		1	292023
17	Pad-Side		2	29090078-1
18	Paper-Output Cord		1	290076
19	Dust Cover		1	28165028-1
20	Sheet	670x1000mm	2	29095016
21	Adhesive Tape			
22	Master Carton Box		1	29050088
23	Pad Sheet		2	29095030
24	Pad – Turntable		1	24509019
25	Sealing Hook		8	282301
26	Adhesive Tape	W50mm		262037

a: Universal Type
b: Germany Type
c: Austrlia Type

PARTS NO.	DESCRIPTION	SPECIFICATIONS	Q'TY	S. N.
Q1~Q7	Transistor	2SC945Ⓛ Por K	7	2210743 or 2210741
Q8	Transistor	2SA641 (H)	1	2210981
Q9	Transistor	2SC1449 (L)	1	2200623
D1	Varistor	VD1122	1	4000030
D2	Diode	1S953	1	223104
VR1, VR2	Resistor-Semi Fixed	NO 8 HRIKBC	2	5215001
C3	Capacitor-Elect.	CE04W 25V 10 10μF	1	352751001
C4	Capacitor-Elect.	CE 04W 25V 10μF	1	352750101

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